IN THE CLAIMS:

1. (Currently amended) A rotational angle detecting device comprising:

a magnet support;

at least two magnets attached to the magnet support, so that the magnets produce a magnetic field across a center of rotation, wherein the magnets are made of ferrite-based magnetic materials and have opposite end portions in a circumferential direction about the center of rotation, and wherein the magnets are spaced from each other in the circumferential direction by gaps;

a sensor disposed within the magnetic field and arranged and constructed to detect a change of direction of the magnetic field as the magnets and sensor rotate relative to each other;

wherein the sensor outputs signals representing a relative rotational angle.

2. (Original) A rotational angle detecting device as in claim 1, wherein the at least two magnets are disposed substantially symmetrically with respect to the center of rotation.

3. (Original) A rotational angle detecting device as in claim 2, wherein the sensor is positioned substantially at the center of rotation.

4. (Original) A rotational angle detecting device as in claim 3, wherein the magnet support comprises a substantially tubular member, and

the at least two magnets are attached to an inner peripheral surface of the tubular member, and

the substantially tubular member has a central axis along the center of rotation.

5. (Original) A rotational angle detecting device as in claim 4, wherein the magnets are magnetized to produce a substantially uniform magnetic field that intersects the sensor, and wherein the substantially uniform magnetic field can be represented by substantially parallel, unidirectional, magnetic field lines intersecting the sensor.

6. (Original) A rotational angle detecting device as in claim 4, wherein each of the magnets has an arc-shaped configuration along a circumferential direction of the tubular member.

7. (Original) A rotational angle detecting device as in claim 6, wherein each of the magnets has a thickness in a radial direction of the tubular member, and the thickness of each magnet is substantially uniform along the circumferential direction of the tubular member.

8. (Original) A rotational angle detecting device as in claim 6, wherein each of the magnets has opposite end surfaces along the circumferential direction.

9. (Original) A rotational angle detecting device as in claim 8, wherein each of the end surfaces extends along the radial direction of the tubular member from the inner peripheral surface of the tubular member towards the center of rotation.

10. (Original) A rotational angle detecting device as in claim 8, wherein each of the end surfaces comprises a first surface and a second surface that are respectively substantially aligned with a direction of the magnetic field and substantially aligned perpendicular to the direction of the magnetic field.

11. (Original) A rotational angle detecting device as in claim 3, wherein each of the magnets extends along an angle measured about the center of rotation, and

wherein the angle is determined such that an error of the output signal from the sensor due to an offset of a location of the sensor away from the center of rotation is less than a predetermined value.

12. (Original) A rotational angle detection device as in claim 11, wherein the angle is determined based on factors comprising a maximum offset distance tolerance of the sensor from the center of rotation, the material of the magnets, and a thickness of each of the magnets in a radial direction about the center of rotation.

13. (Original) A rotational angle detection device as in claim 12, wherein the possible maximum offset distance tolerance is about 0.75 mm.

14. (Canceled)

15. (Original) A rotational angle detection device as in claim 2, wherein the sensor comprises an integrated circuit that includes a magnetic resistance element.

16. (Currently amended) A rotational angle detecting device comprising:

a magnet support structured as a circle, the magnet support having an inner and outer surface;

a [[pair of magnets]] first and second magnet attached to the inner surface of the magnet support [[,so that the magnets]] to produce a magnetic field across a center of rotation, wherein the first and second magnet each have a pair of opposing end portions, the opposing end portions of the first magnet being separated from the opposing end portions of the second magnet by a gap;

~~wherein the magnetic field is substantially uniform and unidirectional across the center of rotation;~~

a sensor disposed within the magnetic field and arranged and constructed to detect a change of direction of the magnetic field as the magnets and sensor rotate relative to each other;

wherein the sensor outputs signals representing a relative rotational angle.

17. (Original) A rotational angle detecting device as in claim 16, wherein the pair of magnets are disposed substantially symmetrically with respect to the center of rotation; and

wherein the sensor is positioned substantially at the center of rotation.

18. (Currently amended) A rotational angle detecting device as in claim 17, ~~wherein each of the magnets has opposite end surfaces along the circumferential direction, and~~

wherein each of the opposing end [[surfaces]] portions comprises a first surface and a second surface that intersect with each other and are respectively inclined relative to an inner circumferential surface and an outer circumferential surface of each of the magnets by obtuse angles.

19. (Currently amended) A rotational angle detecting device as in claim 17, ~~wherein each of the magnets has opposite end surfaces along the circumferential direction, and~~

wherein each of the opposing end [[surfaces]] portions is substantially orthogonal to an outer circumferential surface of each of the magnets.

20. (New) A rotational angle detecting device comprising:

a magnet support having an inner radial surface and a radial outer surface;

at least two magnets positioned to produce a magnetic field across a center of rotation, wherein the magnets each include an inner and outer surface and a first and second end portion, further wherein each of the magnets outer surface is attached to the magnetic support radial inner surface and each of the magnets first and second ends are spaced from each other in the circumferential direction by gaps; and

a sensor disposed within the magnetic field and arranged and constructed to detect a change of direction of the magnetic field as the magnets and sensor rotate relative to each other,

wherein the sensor outputs signals representing a relative rotational angle.

21. (New) A rotational angle detecting device as in claim 20, wherein the end portions of the magnets have predetermined configurations.

22. (New) A rotational angle detecting device as in claim 21, wherein the predetermined configurations of the magnet end portions are determined based on a central angle about the center of rotation between the opposite circumferential ends of each of the magnets.

23. (New) A rotational angle detecting device as in claim 21, wherein the magnet end portions are defined by a surface that is substantially perpendicular to the direction of the magnetic field that extends across the center of rotation.

24. (New) A rotational angle detecting device as in claim 21, wherein the magnet end portions are defined by a surface that is substantially parallel to the direction of the magnetic field that extends across the center of rotation.

25. (New) A rotational angle detecting device as in claim 21, wherein a yoke portion is positioned between inner radial surface of the magnet support and the outer surface of the magnet.

26. (New) A rotational angle detecting device as in claim 25, wherein the yoke portion is formed along the entire inner radial surface of the magnet support.

27. (New) A rotational angle detecting device comprising:

a magnet support having an inner surface and a outer surface;

at least two magnets positioned to produce a magnetic field across a center of rotation, wherein the magnets each include an inner and outer surface and a first and second end portion, further wherein each of the magnets outer surface is attached to the magnet support inner surface and each of the magnets first and second ends are spaced from each other in the circumferential direction by gaps; and

a sensor disposed within the magnetic field and arranged and constructed to detect a change of direction of the magnetic field as the magnets and sensor rotate relative to each other,

wherein the sensor outputs signals representing a relative rotational angle.

28. (New) A rotational angle detecting device as in claim 27, wherein the inner surface is radial.

29. (New) A rotational angle detecting device as in claim 27, wherein each of the at least two magnets has an arc-shaped configuration along the radial direction of the magnet support.